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United States
Department of
Agriculture

Animal and
Plant Health
Inspection
Service

Veterinary
Services

Dairy Calf Management: Feeds & Weaning Practices

National Dairy Heifer Evaluation Project

Feed types used for dairy calves and the age at which they are offered can have profound impacts on the health, growth, and economics of replacements. During a 1991-92 study by the National Animal Health Monitoring System (USDA:APHIS:VS), dairy farmers were asked about their uses of feeds for calves. In addition, they were asked about various management factors related to calf weaning time.

The National Dairy Heifer Evaluation Project (NDHEP), included 1,811 farms in 28 states.¹ These operations were randomly chosen so that the results would be representative of herds of 30 cows or more in the 28 states. The herds represent 78 percent of the National dairy cow population.

A variety of liquid feeds are available for young dairy calves after colostrum is fed. Figure 1 shows the types of liquid feeds currently used. Milk from cows that have recently calved and milk replacer are the two most common sources. Whole milk and mastitic/antibiotic milk are also common, yet much less than the first two choices.²

Figure 2 shows the wide variation in weaning ages found. Ten percent of the dairy farmers report weaning their calves by an average age of 4 weeks, yet another group (over 15 percent of the producers) wean beyond 10 weeks of age. The average calf age at weaning was 7.9 weeks, which is consistent with the large number of producers who reported weaning at 8 weeks. Variation in management systems creates a large variability in weaning ages.

The age at which calves are offered grain, forage, and water will have a great impact on weaning ages, economics, and other outcomes such as calf growth.

Figure 1. Liquid Feed Types Fed to Dairy Calves After Colostrum*

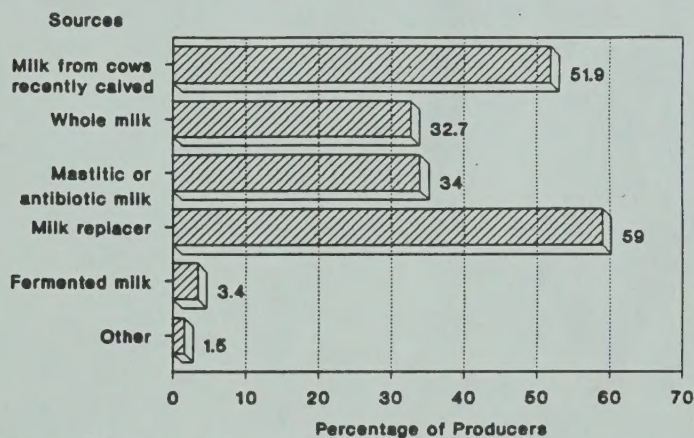
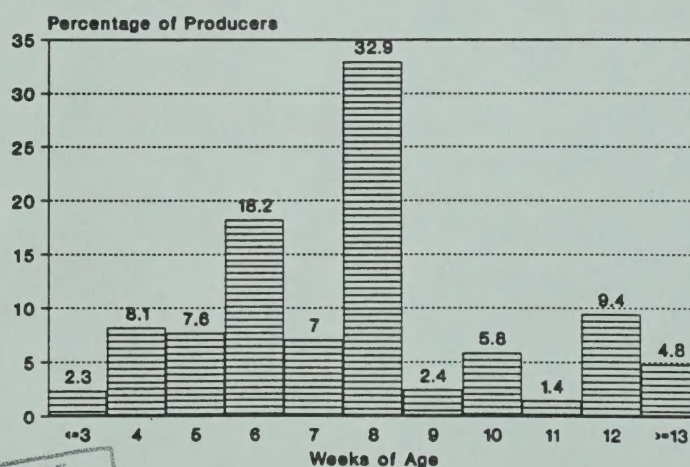


Figure 2. Average Age Producers Report Weaning Dairy Calves

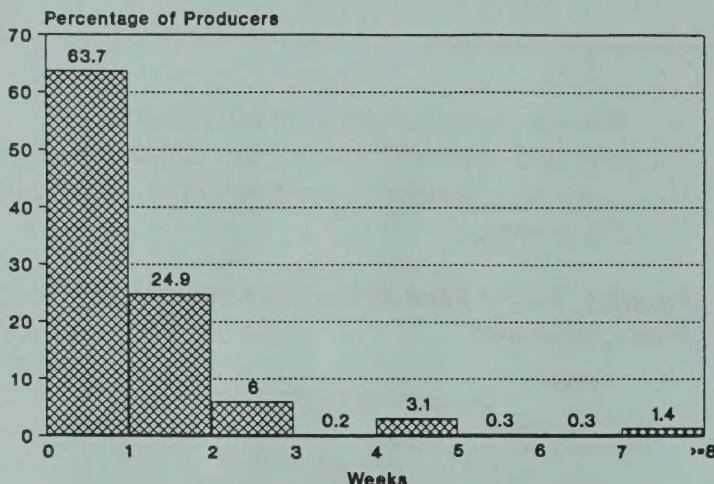


¹States participating in the National Dairy Heifer Evaluation Project (NDHEP): Alabama, California, Colorado, Connecticut, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Maine, Maryland, Massachusetts, Michigan, Minnesota, Nebraska, New Hampshire, New York, North Carolina, Pennsylvania, Ohio, Oregon, Rhode Island, Tennessee, Vermont, Virginia, Washington, and Wisconsin.

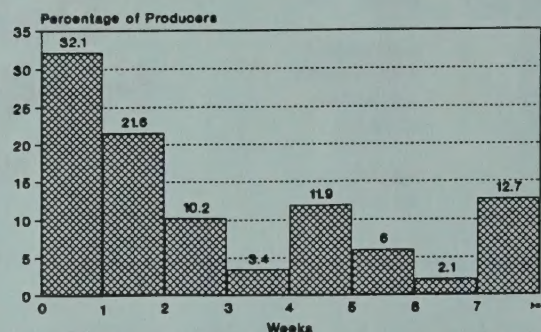
²Additional information on the types and quantities of milk replacers fed are provided in other NDHEP materials.

Figure 3. Percentage of Producers Offering Dairy Calves Grain, Forage, and Water by Age Group

Grain



Forage



Water

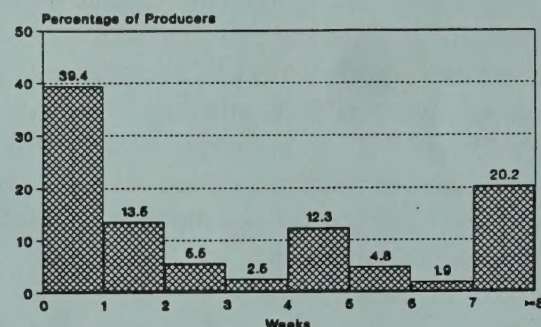


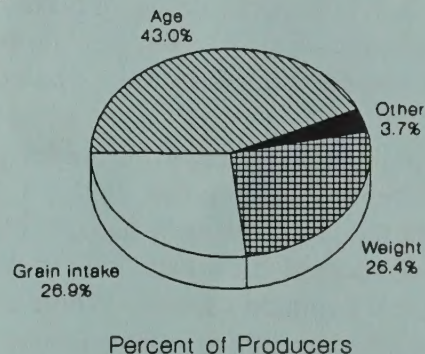
Figure 3 shows that almost 90 percent of the producers offer calves grain by 2 weeks of age with most of those offering grain by 1 week. A small percentage of producers do not offer grain until the calves are 4 weeks old or more. Ingestion of grain at an early age is important for a calf's rumen development which facilitates its transition to solid feeds.

Over half of the producers offer calves forage within 2 weeks of birth. Just under 15 percent wait until they are 6 weeks old or more to offer forage.

It is interesting to note that the ages at which dairy farmers provide calves with forage and water are similar. Water is offered within 2 weeks by about 53 percent of the producers. About 22 percent do not offer water to their calves until they are 6 weeks old or more.

Figure 4 shows the management factors producers reportedly use to determine their calves weaning time. Age is the primary factor for 43 percent of the producers. Weight and grain intake are each the first factor considered for over 26 percent of the producers. Some of the reasons included in the "Other" category were space

Figure 4. Factors Used to Determine Dairy Calf Weaning Time



availability and combinations of the factors shown in this pie chart. 🐄

NDHEP collaborators included the National Agricultural Statistics Service (USDA:NASS), National Veterinary Services Laboratories (USDA:APHIS:VS), and State and Federal Veterinary Medical Officers. The Cooperative Extension Service provided editorial assistance. For more information on the National Dairy Heifer Evaluation Project and other NAHMS programs, please contact:

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